

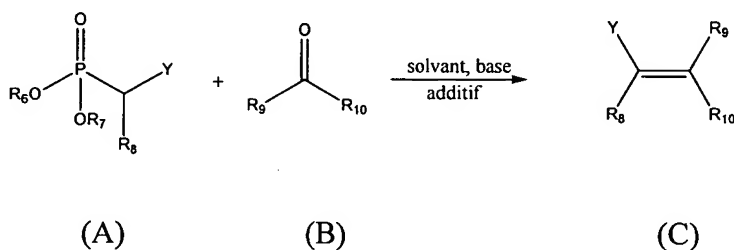
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-21 (Canceled)

22- (New) A process for the diastereoselective preparation of olefins (C) via the Horner-Wadsworth-Emmons reaction, comprising the step of reacting at low temperature a phosphonate (A) with a carbonyl derivative (B) in the presence of a base, in a suitable solvent to form a reaction medium,



in which the compounds (A) (B) and (C) are such that:

Y represents an electron-withdrawing group of the formula:

- CO₂R,
- CN,
- C(O)R,
- S(O)R,
- S(O)₂R,
- C(O)NRR',
- N=CRR', or

-P(O)OROR' ,

with R and R' as defined below,

R₆ and R₇, taken independently, are identical or different and represent:

a saturated or unsaturated, linear or branched aliphatic radical containing from 1 to 24 carbon atoms, optionally substituted with hetero atoms;

a saturated, unsaturated or aromatic, monocyclic or polycyclic cycloaliphatic radical containing from 4 to 24 carbon atoms, optionally substituted with hetero atoms; or

a saturated or unsaturated, linear or branched aliphatic radical bearing a cyclic substituent optionally substituted with hetero atoms in the aliphatic part and/or the cyclic part;

R₁₀, R and R', taken independently, are identical or different and represent:

a hydrogen atom;

a saturated or unsaturated, linear or branched aliphatic radical having from 1 to 24 carbon atoms, optionally substituted with hetero atoms;

a saturated, unsaturated or aromatic, monocyclic or polycyclic cycloaliphatic radical having from 4 to 24 carbon atoms, optionally substituted with hetero atoms; or

a saturated or unsaturated, linear or branched aliphatic radical bearing a cyclic substituent optionally substituted with hetero atoms in the aliphatic part and/or the cyclic part;

R₆, R₇, R and R' taken together optionally form a saturated, unsaturated or aromatic ring optionally comprising hetero atoms;

R₈ represents a radical of the formula:

- R,
 - a halogen atom,
 - OR, or
 - NRR',
- with R and R' as defined above,

R₉ represents a radical of the formula:

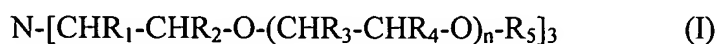
a saturated or unsaturated, linear or branched aliphatic radical having from 1 to 24 carbon atoms, optionally substituted with hetero atoms;

a saturated, unsaturated or aromatic, monocyclic or polycyclic cycloaliphatic radical having from 4 to 24 carbon atoms, optionally substituted with hetero atoms; the hetero atoms also possibly being present in the cyclic part; or

a saturated or unsaturated, linear or branched aliphatic radical bearing a cyclic substituent optionally substituted with hetero atoms in the aliphatic part and/or the cyclic part;

with the further proviso that R₉ takes precedence over R₁₀ according to the Cahn Ingold and Prelog rules, and

wherein a tris(polyoxaalkyl)amine sequestering agent of formula (I):



in which:

n is an integer between 0 and 10;

R₁, R₂, R₃ and R₄ are identical or different and represent a hydrogen atom or an alkyl radical having from 1 to 4 carbon atoms; and

R₅ represents a hydrogen atom, an alkyl or cycloalkyl radical containing up to 12 carbon atoms, a phenyl radical or a radical of formula -C_mH_{2m}-Φ, or C_mH_{2m+1}-Φ-, with m being an integer between 1 and 12 and Φ being a phenyl radical;

is being added to the reaction medium in an amount that is effective to increase the diastereoselectivity of the olefins (C).

23- (New) The process as claimed in claim 22, wherein the tris(polyoxaalkyl)amine sequestering agent is a tris(polyoxaalkyl)amines of formula (I) wherein:

R₁, R₂, R₃ and R₄ represent a hydrogen atom or a methyl radical;

n is an integer between 0 and 3; and

R₅ represents a hydrogen atom or an alkyl radical having from 1 to 4 carbon atoms.

24- (New) The process as claimed in claim 23, wherein in formula (I):

R₁, R₂, R₃ and R₄ represent a hydrogen atom;

n is 1; and

R₅ represents a methyl radical.

25- (New) The process as claimed in claim 22, wherein the tris(oxaalkyl)amine sequestering agent of formula (I) is used in an amount of between 0.05 and 10 equivalents per 1 equivalent of phosphonate, one equivalent of aldehyde and one equivalent of base.

26- (New) The process as claimed in claim 25, wherein the amount of tris(oxaalkyl)amine sequestering agent of formula (I) used is 1 equivalent of tris(oxaalkyl)amine sequestering agent of formula (I) per 1 equivalent of phosphonate, one equivalent of aldehyde and one equivalent of base, the whole being dissolve in the solvent.

27- (New) The process as claimed in claim 22, wherein in formula (A):

Y represents CO_2R , with R representing a hydrogen atom or a linear, branched or cyclic, saturated or unsaturated alkyl radical alkyl having from 1 to 12 carbon atoms,

R_6 and R_7 represent a $-\text{CH}_2\text{CF}_3$ radical, and

R_8 represents a hydrogen atom.

28- (New) The process as claimed in claim 22, wherein in formula (A):

Y represents CO_2R , with R representing a methyl radical,

R_6 and R_7 represent a $-\text{CH}_2\text{CF}_3$ radical, and

R_8 represents a hydrogen atom.

29- (New) The process as claimed in claim 22, wherein the carbonyl derivative is an aldehyde, with R_{10} representing a hydrogen atom.

30- (New) The process as claimed in claim 29, wherein R_9 is an aliphatic radical, optionally having ethylenic unsaturations.

31- (New) The process as claimed in claim 9, wherein the radical R_9 is cyclohexyl.

32- (New) The process as claimed in claim 9, wherein R_9 is aromatic, optionally having one or more substitutions with alkoxy groups having from 1 to 6 carbon atoms, halogen atoms or CF_3 groups.

33- (New) The process as claimed in claim 32, wherein the radical R₉ is a phenyl radical.

34- (New) The process as claimed in claim 22, wherein the base used is:

an amide of the formula: MNR''R''' with M being an alkali metal, and R'', R''' being alkyl or alkylsilane radicals,

an alkoxide of the formula: MOR'' with M being an alkali metal and R'' being an alkyl radical,

an hydride of the formula: MH with M being an alkali metal,

a carbonate of the formula: M₂CO₃, with M being an alkali metal or an alkaline-earth metal,

an alkali metal or alkaline-earth metal hydroxide, or

an organic base, in combination with alkali metal or alkaline-earth metal halides.

35- (New) The process as claimed in claim 34, wherein the base is the potassium salt of hexamethyldisilazane (KHMDs) and potassium tert-butoxide (KOtBu).

36- (New) The process as claimed in claim 22, wherein the solvent is a polar solvent.

37- (New) The process as claimed in claim 36, wherein the solvent used is an ether solvent.

38- (New) The process as claimed in claim 37, wherein the solvent used is tetrahydrofuran (THF) or methyl tert-butyl ether (MTBE).

39- (New) The process as claimed in claim 36, wherein the solvent is used in an amount of between 0.1 and 20 ml per mmol of phosphonate (A).

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40- (New) The process as claimed in claim 22, wherein the reaction medium is maintained at a temperature of less than or equal to 0°C.

41- (New) The process as claimed in claim 40, wherein the temperature is maintained at a temperature of less than or equal to -20°C.

42- (New) The process as claimed in claim 41, wherein the temperature is maintained at a temperature of less than or equal to -50°C.